

# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>9594WO/AT/MZ</b>	<div style="display: flex; justify-content: space-between;"> <div>FOR FURTHER ACTION</div> <div>see Form PCT/ISA/220 as well as, where applicable, item 5 below.</div> </div>	
International application No. <b>PCT/SE 2004/001931</b>	International filing date (day/month/year) <b>17 December 2004</b>	(Earliest) Priority Date (day/month/year) <b>22 December 2003</b>
Applicant <b>ABB Research Ltd et al</b>		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 3 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2. ☐ Certain claims were found unsearchable (see Box No. II)

3. ☐ Unity of invention is lacking (see Box No. III)

**4. With regard to the title,**

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

**5. With regard to the abstract,**

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

**6. With regard to the drawings,**

a. the figure of the drawings to be published with the abstract is Figure No. 3A

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

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# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/SE 2004/001931

## A. CLASSIFICATION OF SUBJECT MATTER

IPC7: G01S 5/14, G06F 17/30, G06F 17/60  
According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: G01S, G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-INTERNAL, WPI, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	GB 2371884 A (ABB AB), 7 August 2002 (07.08.2002), page 1, line 11 - page 2, line 10; page 12, line 22 - page 13, line 12 --	1-40
Y	WO 0201484 A1 (DATRIA SYSTEMS, INC.), 3 January 2002 (03.01.2002), page 3, line 19 - line 32; page 13, line 6 - page 14, line 17, figures 2,12 --	1-40
A	US 2003061159 A1 (DOUGLAS B. ADAMS ET AL), 27 March 2003 (27.03.2003), paragraph (0061), figure 1 --	1-40

☒ Further documents are listed in the continuation of Box C. ☒ See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier application or patent but published on or after the international filing date	"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search 25 February 2005	Date of mailing of the international search report 17-03-2005
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Name and mailing address of the ISA/ Swedish Patent Office Box 5055, S-102 42 STOCKHOLM Facsimile No. +46 8 666 02 86	Authorized officer Göran Magnusson/MN Telephone No. +46 8 782 25 00
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## INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 2004/001931

## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 9635196 A1 (MINNESOTA MINING AND MANUFACTURING COMPANY), 7 November 1996 (07.11.1996), abstract, figure 2 --	1-40
A	US 4920488 A (OLIVER D. FILLEY), 24 April 1990 (24.04.1990), column 1, line 55 - column 2, line 45, figure 1 --	1-40
A	US 5214757 A (THAD MAUNEY ET AL), 25 May 1993 (25.05.1993), abstract, figure 1 --	1-40
A	US 6609090 B1 (CHRISTOPHER W. HICKMAN ET AL), 19 August 2003 (19.08.2003), column 5, line 35 - column 6, line 65, figure 1 -- -----	1-40

**INTERNATIONAL SEARCH REPORT**  
Information on patent family members

30/01/2005

International application No.

PCT/SE 2004/001931

GB	2371884	A	07/08/2002	DE	10149693	A	23/05/2002
				GB	0025051	D	00/00/0000
				SE	0103361	A	13/04/2002
				US	20020046208	A	18/04/2002
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WO	0201484	A1	03/01/2002	AU	7020201	A	08/01/2002
				CA	2414267	A	03/01/2002
				US	6728708	B	27/04/2004
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US	20030061159	A1	27/03/2003	NONE			
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WO	9635196	A1	07/11/1996	AU	692388	B	04/06/1998
				AU	5577396	A	21/11/1996
				BR	9608462	A	29/12/1998
				CA	2217869	A	07/11/1996
				EP	0826202	A	04/03/1998
				JP	11504456	T	20/04/1999
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US	4920488	A	24/04/1990	EP	0450212	A	09/10/1991
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US	5214757	A	25/05/1993	AU	8738991	A	02/03/1992
				WO	9202891	A	20/02/1992
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US	6609090	B1	19/08/2003	US	20030191628	A	09/10/2003